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**Williamson, Inc. Case**

Williamson, Inc., manufactures a variety of consumer products. Due to the recent

economic downturn, there is an urgent need for the company to save its money. Ted

Williamson, a president of the company, wants to improve the efficiency of its

operations. In particular, he would like to adhere to weekly operating budgets and to

develop effective operating plans, using quantitative methods. He has a weekly

operating budget of $11,980 for production of three products, which for convenience

shall be referred to as X, Y, and Z. The budget is intended to pay for direct labor and

materials. Processing requirements for the three products, on a per unit basis, are shown

in the table.

|  |  |  |  |
| --- | --- | --- | --- |
| Product | Labor  (hours) | Material A  (pounds) | Material B  (Pounds) |
| X | 5 | 5 | 1 |
| Y | 4 | 2 | 0 |
| Z | 2 | .5 | 2 |

Currently, the company has a contractual obligation for at least 85 units of product Y per

week to one of its major customers.

In order to produce its products, the company needs two materials, material A and B.

Material A costs $4 per pound, as does material B. Labor costs $8 per hour.

Product X sells for $122 a unit, product Y sells for $115 per unit, and product Z sells for

$76 a unit.

Ted Williamson would like to know the quantity of each product to be produced.